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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/771,891	02/04/2004	Gregory A. Majcher	00AB040 / ALBRP173USA	3878
7590 Susan M. Donahue Rockwell Automation 704-P, IP Department 1201 South 2nd Street Milwaukee, WI 53204			EXAMINER BONZO, BRYCE P	
			ART UNIT 2113	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	DELIVERY MODE
3 MONTHS			02/21/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/771,891

Applicant(s)

MAJCHER ET AL.

Examiner

Bryce P. Bonzo

Art Unit

2113

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **Final Official Action**

### ***Status of the Claims***

Claims 23-28, 34 and 44 are rejected under 35 USC §102.

Claims 29-33 and 35-43 are rejected under 35 USC §103.

### ***Rejections under 35 USC §102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 23-28, 34 and 44 are rejected under 35 U.S.C. 102(e) as being anticipated by Grieshaber (United States Patent No. 6,598,106). As per the claims:

23. A system that facilitates generating a dynamic output in a state machine, comprising:

an input component that receives communication, the communication is related to at least one indicator that receives updated status/ event information from the communication (column 9, lines 60-65; the passage recites “repeatedly testing” which points to the signal updating); and

a logic function component that defines a logical function using at least one function block and links the logical function with the indicator to define the behavior of an output and selectively provide an output signal according to the logic function and the at least one indicator (column 9, lines 49 through column 10, line 27; Figure 7, item 704 shows a logic function and an output varying with indicator).

24. The system of claim 23, the output signal is transmitted to at least one of a process, a machine, a backplane, a bus and a network (column 9, lines 60 through column 10, lines 27)..

25. The System of claim 23, further comprising a memory component that stores data that is operatively coupled to at least one of the interface component, the logic function component and the output component (Figure 5).

26. The system of claim 25, further comprising a processing component that executes instructions within the memory that is operatively coupled to at least one of the input component the output component and the memory component (Figure 5).

27. The system of claim 26, the processor updates the indicator according to the communication (column 9, lines 49 through column 10, line 28).

Art Unit: 2113

28. The system of claim 23, further comprising a closed loop component that receives information from the input component that is operatively coupled to the output component to provide feedback control (column 9, lines 49 through column 10, lines 28).

34. The system of claim 93, the indicator is at least one of a message connection health indicator, an I/O error indicator (column 9, lines 49 through column 10, lines 28), a run/idle indicator, a network error indicator, an I/O point fault indicator, a hardware input indicator, a hardware output indicator, an I/O data indicator, and an output device status indicator.

44. A system that provides an output, comprising:

means for receiving information regarding associated logical function and status/event indicator components;

means for determining the status of the associated logical function and status/event indicator components;

means for selecting an output based on the information received; and

means for broadcasting an output signal from an output component

(These process steps are disclosed in the fault analysis described at column 9, lines 49 through column 10, lines 28 and accompanying drawings).

***Rejections under 35 USC §103***

Art Unit: 2113

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grieshaber (United States Patent No. 6,598,106 B1).

As per claim 35, Grieshaber does not explicitly disclose:

35. The system of claim 23, the input component further comprises a message buffer component employed to store at least one message and is operatively coupled to at least one of the input component and the logic function component.

Official Notice is given that it is notoriously well known in the computing arts to incorporate message buffers into data transmission systems. Buffers provides a reception and holding area, which while not necessary in some applications, is ubiquitous. The buffer allows messages to be received in chunks, stored awaiting processing, and be latched as group when passed on to the next element in a system. Thus it would have been obvious to one of ordinary skill in the art of computing, to explicitly incorporate buffers into the fault detection and failure handling system of Grieshaber thus creating a more fluid and fault tolerant system for handling faults.

Art Unit: 2113

Claims 29-33 and 36-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grieshaber (United States Patent No. 6,598,106 B1) in view of Tentij (United States Patent No. 6,513,129 B1).

As per claim 29, Grieshaber does not explicitly disclose, while Tentij teaches:

29. The system of claim 23, further comprising a configuration tool that creates an association between the logic function component and the at least one indicator (column 7, lines 10-22).

Grieshaber discloses a decision making element, which by definition is a functional block, but does not describe the mechanisms to implement the block or program the block leaving the reader fill in the missing area. Tentij describes a similar decision system for alerting and reporting, and further describes the configuration tool which programs the decision blocks with various rules. Tentij explicitly describes a shortfall in modern systems where it is difficult to program the decision blocks in fault alerting systems and designed a configuration tool for system such as Grieshaber. Thus it would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the configuration tool and associated functions of Tentij into the fault handler of Grieshaber thereby creating a system which can monitor and react to faults while being able to be programming in a versatile manner.

Art Unit: 2113

30. The system of claim 29, the configuration tool further comprising an intelligence component employed to automatically determine an association between the logic function component and the at least one indicator (column 7, lines 23-56).

31. The system of claim 29, the configuration tool is one of a computer, a workstation, a handheld PC, a tablet PC, a personal digital assistant and a cell phone (column 7, lines 10-22).

As per claim 29, Grieshaber does not explicitly disclose, while Tentij teaches:

32. The system of claim 23, the logic function component is associated with at least one function block (column 7, lines 23-56).

Grieshaber discloses a decision making element, which by definition is a functional block, but does not describe the mechanisms to implement the block or program the block leaving the reader fill in the missing area. Tentij describes a similar decision system for alerting and reporting, and further describes the configuration tool which programs the decision blocks with various rules. Tentij explicitly describes a shortfall in modern systems where it is difficult to program the decision blocks in fault alerting systems and designed a configuration tool for system such as Grieshaber. Thus it would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the configuration tool and associated functions of Tentij into the fault



Art Unit: 2113

handler of Grieshaber thereby creating a system which can monitor and react to faults while being able to be programming in a versatile manner.

33. The system of claim 1, the function block is one of a Boolean operator, a flip-flop, a counter, a timer and an analog function (column 7, lines 23-56).

As per claim 36, Grieshaber discloses:

A method to provide a variable output related to received information, comprising:

accepting an input comprising at least one indicator that indicates updated status/event information (column 9, lines 60-65);

associating the at least one indicator with the at least one function block (column 9, lines 49-column 10, lines 27); and

providing an output based at least in part upon the input and the logic function (column 9, lines 49-column 10, lines 28).

Grieshaber does not explicitly disclose, while Tentij teaches:

transmitting the input to a logic function, the logic function contains at least one function block (column 7).

Grieshaber discloses a decision making element, which by definition is a functional block, but does not describe the mechanisms to implement the block or program the block leaving the reader fill in the missing area. Tentij describes a similar decision

Art Unit: 2113

system for alerting and reporting, and further describes the configuration tool which programs the decision blocks with various rules. Tentij explicitly describes a shortfall in modern systems where it is difficult to program the decision blocks in fault alerting systems and designed a configuration tool for system such as Grieshaber. Thus it would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the configuration tool and associated functions of Tentij into the fault handler of Grieshaber thereby creating a system which can monitor and react to faults while being able to be programming in a versatile manner.

37. The method of claim 36, farther comprising selecting a function block based at least in part upon the input received (Grieshaber: column 9, lines 49-column 10, lines 27).

38. The method of claim 36, further comprising associating the input with at least one function block via a configuration component (Tentij: column 7, lines 10-22).

39. The method of claim 36, further comprising receiving the output from the logic function and transmitting the output via an output component (Grieshaber: column 9, lines 49-column 10, lines 27).

40. The method of claim 36, the at least one indictor is received from an external source on one of a

Art Unit: 2113

periodic basis, a continuous basis and a one-time basis (Grieshaber: column 9, lines 49-column 10, lines 27).

41. (New) The method of claim 36, the at least one indicator is at least one of a status indicator and an event indicator (Grieshaber: column 9, lines 49-column 10, lines 27).

42. (New) The method of claim 41, the indicator is at least one of a message connection health indicator, an I/O error indicator, a run/idle indicator, a network error indicator, an I/O point fault indicator, a hardware input indicator, a hardware output indicator, an I/O data indicator, and an output device status indicator (Grieshaber: column 9, lines 49-column 10, lines 27).

43. The method of claim 37, the function block is one of a Boolean operator, a flip-flop, a counter, a timer and an analog function (Tentij: column 7, lines 23-56).

### ***Response to Applicant's Arguments***

Applicant has amended the claims in a manner shown in adjacent passages of the prior art and Figure 7.

### ***Final Disposition***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2113

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryce P. Bonzo whose telephone number is (571)272-3655. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (571)272-3645. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2113

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Bryce P Bonzo  
Primary Examiner  
Art Unit 2113